

REMARKS

I. Amendments to the Specification:

The specification has been amended to update the status of priority applications and to correct clerical errors. No new matter has been introduced by way of these amendments.

II. Amendments to the Claims:

Claims 1-82 are pending in this application.

Claims 35, 44, 64, 68, 75, 79, 80, and 82 are canceled herewith without prejudice or disclaimer of the subject matter contained therein. Applicants reserve the right to pursue the subject matter of these claims in this or a related application.

Claims 83-88 have been newly added, and claims 18, 26, 50, 51, and 62 have been amended herein. Support for the new and amended claims can be found throughout the specification as filed and in the original claims. Accordingly, no new matter has been added.

III. Reply to Restriction Requirement

(a) Group Restriction:

Pursuant to 35 U.S.C. § 121, the Examiner required restriction to one of the following four inventions:

Group I: claims 1-78, drawn to a method for genetically altering a subject or a patient or a method for preventing infection of a patient by HIV or a method of treating HIV infection in a patient comprising at least the step of administering genetically modified cells to the patient, classified in class 424, subclass 93.21.

Group II: claims 79-80, drawn to a method for delivering a sex steroid analog to a patient, classified in class 424, subclass 198.1.

Group III: claim 81, drawn to a method for enhancing transplantation of donor hematopoietic stem cells into the thymus of a recipient patient, classified in class 424, subclass 93.1.

Group IV: claim 82, drawn to a method for increasing virus-specific peripheral T cell responsiveness of a patient with an at least partially atrophied thymus comprising reactivating the thymus of the patient and exposing the patient to a virus, classified at least in class 424, subclass 93.1.

Applicants elect **Group I, claims 1-78**, with traverse. Applicants draw to the Examiner's attention that claims 35, 44, 64, 68, 75, 79, 80, and 82 have been canceled and that new claims 83-88, which fall within Group I, have been added.

Applicants traverse this Restriction Requirement, because Applicants aver that it would not constitute an undue burden on the Examiner to examine the claims of Group I along with the single claim of Group III (*i.e.*, claim 81) as the scope of both groups overlap. Furthermore, including a single claim for further examination does not constitute a severe burden. Accordingly, Applicants respectfully request that the inventions of Groups I and III be examined together.

(b) Species Restriction:

Since Applicant has elected Group I for examination, the Examiner has further required that Applicant elect a single species of a mechanism for disrupting sex-steroid mediated signaling to the thymus selected from: (1) surgical castration; (2) chemical castration; and (3) administration of one or more pharmaceuticals. Applicants elect "*administration of one or more pharmaceuticals*," with traverse. The claims readable on this election are *claims 1-34, 36-43, 45, 46, 49-63, 65-67, 69-78, 81, and 83-88*.

The Examiner required that if Applicants elect "*administration of one or more pharmaceuticals*," Applicants elect a single species of a pharmaceutical selected from (a) LHRH agonists; (b) LHRH antagonists; (c) anti-LHRH vaccines; (d) anti-androgens; (e) anti-estrogens; (f) SERMs; (g) SARMs; (h) SPRMs; (i) ERDs; (j) aromatase inhibitors; (k) anti-progestogens; (l) dioxalan derivatives; or (m) a specific combination of species a-l. Applicants elect *LHRH agonists*, with traverse. The claims readable on this election are *claims 1-34, 36-43, 45, 46, 49-51, 53-63, 65-67, 69, 78, 81, and 83-88*.

The Examiner also required that if Applicants elect LHRH agonists, Applicants elect a species recited in claim 51. Applicants elect *leuprolide*, with traverse. The claims readable on this election are *claims 1-34, 36-43, 45, 46, 49-51, 53-63, 65-67, 69-78, 81, and 83-88*.

The Examiner further required electing a species of cells from claim 1. Applicants elect *HSC*, with traverse. The claims readable on this election are *claims 1-21, 23-33, 36-42, 45-63, 65-66, 69-73, 76-78, 81, and 83-88*.

The Examiner also required election of a single species of conditions selected from (a) T cell functional disorder; (b) HIV infection; (c) T cell leukemia virus infection; or (e) a single specifically named virus selected from the Markush group of claim 54. Applicants elect *HIV infection*, with traverse. The claims readable on this election are *claims 1-34, 36-43, 45-63, 65-67, 69-74, 76-78, 81, and 83-88*.

The Examiner further required election of a single species of a polynucleotide expressible in genetically modified cells from (a) nef transcription factor gene; (b) a gene that codes for a ribozyme that cuts HIV tat; (c) a gene that codes for a ribozyme that cuts rev gene; (d) a ribozyme that cuts HIV tat and rev genes; (e) RevM10; (f) HIV-1 rev-response element; (g) CXCR4; and (h) PolyTAR. Applicants elect *a gene that codes for a ribozyme that cuts HIV tat*, with traverse. The claims readable on this election are *claims 1-34, 36-43, 45-57, 60-63, 65-67, 69-74, 76-78, 81, and 83-88*.

Finally, the Examiner required election of a single specific named cytokine species or a single specific named growth factor or a single specific combination of a cytokine and a growth factor recited in claims 61-63. Applicants elect *IL-7*, with traverse. The claims readable on this election are *claims 1-34, 36-43, 45-62, 65-67, 69-74, 76-78, 81, and 83-88*.

Applicants respectfully traverse the species election requirements made above for the following reasons.

First, according to MPEP § 803.02, if the members of a Markush group are sufficiently few in number or so closely related that a search and examination of the entire claim can be made without serious burden, the Examiner must examine all the members of the Markush group in the claim on the merits, even though they may be directed to independent and distinct

inventions. In such a case, the Examiner will not follow the procedure described below and will not require provisional election of a single species. (emphasis added). Thus, the MPEP necessarily requires that the Examiner examine all species in the above claims where the number of species recited are sufficiently few in number. In addition, the recited species are also closely related.

Notwithstanding this fact, Applicant further notes that examination of the recited species in the claims in question would not pose an undue burden on the Patent Office. As such, the Office Action has not provided any indication of an undue burden on the Office to examine the species together.

For the foregoing reasons, Applicant respectfully requests that this Species Election Requirement be reconsidered and withdrawn.

CONCLUSIONS

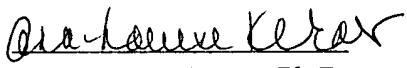
Upon entry of this amendment, claims 1-34, 36-43, 45-63, 65-67, 69-74, 76-78, 81, and 83-88 will be pending in this application.

Other than the one-month extension of time to respond to this Action, no additional fees are due in connection with this correspondence. However, if any fees are due, please charge the payments due to our Deposit Account No. 08-0219.

If a telephone interview would advance prosecution of the application, the Examiner is invited to telephone the undersigned at the telephone number given below.

Respectfully submitted,

Dated: September 15, 2006


Ann-Louise Kerner, Ph.D.
Reg. No. 33,523

WILMER CUTLER PICKERING HALE AND DORR LLP
60 State Street
Boston, MA 02109
Tel.: (617) 526-6192
Fax: (617) 526-5000